Cincinnati-Hamilton, Kentucky Area
Ozone Maintenance and 15%VOC Plan

(65 FR 3630, 01/24/00)

Background of the Plan: On June 19, 2000, EPA issued a final rule determining that the Cincinnati-Hamilton area had attained the 1-hour ozone National Ambient Air Quality Standards (NAAQS), and redesignating both the Ohio and Kentucky portions of the area to attainment (65 FR 37879). A petition for review resulted in the U.S. Court of Appeals for the Sixth Circuit vacating EPA's action in redesignating the area to attainment, and remanding to EPA for further proceedings consistent with the Court's opinion. The court preserved the maintenance plans. On February 12, 2002, the EPA published a proposed rule (67 FR 6459) and a direct final rule (67 FR 6411) to reinstate the attainment redesignation of the Kentucky portion of the Cincinnati-Hamilton moderate 1-hour ozone nonattainment area (Cincinnati-Hamilton area), which comprises the Ohio Counties of Hamilton, Butler, Clermont, and Warren and the Kentucky Counties of Boone, Campbell, and Kenton. The EPA withdrew the direct final rule on April 8, 2002 (67 FR 16646), because adverse comments were received.

EPA also required a 15 percent Reasonable Further Progress (RFP) plan for volatile organic compounds (VOC) reductions in the area be submitted by November 15, 1993, which was subsequently approved by EPA on January 28, 1998 (63 FR 4188). The Commonwealth of Kentucky Natural Resources and Environmental Protection Cabinet (Cabinet) originally submitted a 15 percent plan in November 1993 and revised the plan in March 1994. By the end of the 1994 ozone season, air quality monitoring data for the entire Cincinnati area showed attainment of the 1-hour ozone NAAQS. Therefore, on June 29, 1995, the Cabinet requested that EPA take no further action on the submitted 15 percent plan. Subsequently, during the 1995 ozone season the area monitored a violation, making the 15 percent plan again an applicable requirement for the area. On September 11, 1998, the Cabinet submitted a revised 15 percent VOC Reduction Plan and EPA approved it on December 8, 1998 (63 FR 67586). On July 31, 2002, EPA reinstated the redesignation for the Kentucky portion of the Cincinnati-Hamilton area, and reaffirmed EPA's approval of the 1-hour ozone maintenance plan for this area. This maintenance plan established motor vehicle emission budgets (MVEB) for nitrogen oxides (NOx) and VOC for the last year of the maintenance plan (i.e., 2010). Subsequently, at the request of the transportation community, the Cabinet submitted a revision to the maintenance plan to allocate a portion of the available safety margin to the MVEB. EPA proposed approval of this revision on March 19, 2003, and finalized approval of the revised MVEB on May 30, 2003.

Summary of the Plan: This ozone maintenance plan for the Kentucky portion of the Cincinnati-Hamilton moderate 1-hour ozone attainment area relies on an attainment level of emissions of VOC's and nitrogen oxides (NOx) to maintain the ozone standard through a combination of control measures. These measures include both stationary, mobile and area source controls. The Cabinet agreed to perform triennial reviews of actual emissions for the maintenance area using the latest emission factors, models, and methodologies and to implement certain contingency measures if the emissions

level is exceeded or the standard is violated. The Kentucky portion of the Cincinnati-Hamilton area is projected to have a decrease in VOCs by 23.66 percent and a 10 percent reduction in NOx by year 2010.

Control Measures: A variety of control measures will be utilized including the following:

- Periodic Emissions Inventory
- Emission Statements
- 15 Percent RFP plan for VOC reductions
- VOC Reasonably Available Control Technology Requirements
- Stage II Vapor Recovery
- Vehicle Inspection and Maintenance
- NOx RACT Requirement
- Reformulated Gasoline (RFG)

Motor Vehicle Emissions Budgets (MVEB): The MVEB budget year is 2010 for the Kentucky portion of the Cincinnati-Hamilton area. The MVEB for VOCs is 7.33 tons/day and for Nitrogen oxide (NOx) is 17.13 tons/day.

Contingency Measures: The contingency plan for the Cincinnati-Hamilton area contains three major components: attainment tracking, contingency measures to be implemented in the event that a violation of the ozone NAAQS occurs in the Cincinnati-Hamilton area, and a mechanism with which to trigger the implementation of the contingency measures.

Attainment Tracking

- Air quality monitoring using the existing ozone monitoring network
- Inventory updates on a regular schedule

Contingency Measures (Kentucky portion of the Cincinnati-Hamilton area)

- Implementation of a program to require additional emission reductions on stationary sources
- New Source Review
- Implementation of a more frequent, or more stringent vehicle emissions testing program
- Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high-occupancy vehicles
- Trip Reduction ordinances
- Employer based transportation management plans, including incentives
- Programs to limit or restrict vehicle use in downtown areas, or other areas of emission concentration, particularly during periods of peak use
- Programs for new construction and major construction of paths or tracks for use by pedestrians or by non-motorized vehicles when economically feasible and in the public interest

Triggering Mechanisms

In the event that exceedances of the 1-hour ozone standard are measured in any portion of the nonattainment area, or if periodic emission inventory updates reveal excessive or unanticipated growth greater than 10 percent in ozone precursor emissions, the Cabinet will evaluate existing control measures to

determine the further emission reduction measures that should be implemented at that time.

In the event of a monitored violation of the 1-hour zone standard, the Cabinet commits to adopt, within nine months, one or more of the above contingency measures to achieve reductions sufficient to bring the area back into attainment with the 1-hour ozone NAAQS. All regulatory programs will be implemented within 18 months. The Cabinet will also evaluate existing control measures to see if any further emission reductions should be implemented at that time.

Emission Reductions: On October 29, 1999, Ohio Environmental Protection Agency (OEPA) and the Commonwealth submitted comprehensive inventories of VOC and NOx emissions for the Cincinnati-Hamilton nonattainment area. The inventories include point, area and mobile sources for Hamilton, Butler, Clermont, and Warren counties. Additionally, non-highway sources are included for the Boone, Campbell, and Kenton counties. A base year of 1990 is used for calculations to demonstrate maintenance. The area wide VOC emissions inventory for baseline year 1990, was 308.34 tons/day with a total decrease of 79.89 tons/day by 2010. The VOC emissions inventory for the counties of Boone, Campbell, and Kenton, including non-highway sources with baseline year 1990 is 42.64 tons/day with a decrease of 10.09 tons/day by year 2010. The area wide NOx emissions inventory for baseline year 1990, was 509.14 tons/day with a total decrease of 83.67 tons/day by 2010. The NOx emissions inventory for the counties of Boone, Campbell, and Kenton, including non-highway sources with baseline year 1990 is 68.64 tons/day with a decrease of 6.87 tons/day by year 2010.

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Federal Register: 01/24/2000 65 FR Page 3630 Proposed Approval Redesignation to Attainment

06/19/2000 65 FR Page 37879 Final Approval Redesignation to Attainment

09/11/2001 99 FR Page 9000 Court-Order Designation to Nonattainment

02/12/2002 67 FR Page 6411 Direct Final Redesignation to Attainment

04/08/2002 67 FR Page 16646 Withdrawal Redesignation to Attainment

07/31/2002 67 FR Page 49600 Final Approval Redesignation to Attainment

03/19/2003 67 FR Page 13247 Proposal Revisions to Maintenance Plan

05/30/2003 67 FR Page 32382 Final Revisions to Maintenance Plan